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Editorial

The birth of *Bone Reports*

A great legacy of a deeper understanding of the molecular signaling systems within and between bone cells has been the development of therapeutic agents to treat osteoporosis and thus prevent fragility fractures. This research discipline has grown very rapidly since the late 1980s and has been underpinned by excellence in the fields of mouse genetics, basic bone cell biology, preclinical research in animal models, and clinical research involving large multicentre randomized controlled trials in humans. In parallel, bone imaging techniques for measuring skeletal fragility in animal models and humans have also rapidly evolved, so that trabecular and cortical microstructure may now be visualized with high resolution. The journal *Bone* has provided a stimulating interdisciplinary forum for the critical review of these new methods and has been a home for many discoveries into bone and mineral metabolism, bone structure and imaging techniques. It has pioneered rapid on-line publication of both original articles and reviews on basic, translational, and clinical aspects of bone and mineral metabolism. *Bone* also encourages submissions related to interactions of bone with other organ systems, including cartilage, endocrine, muscle, fat, neural, vascular, gastrointestinal, hematopoietic, and immune systems. Particular attention is placed on translational research and the application of experimental studies to clinical practice.

Because of the rapid growth in the discipline of bone and mineral metabolism, the need for a sister journal became apparent a few years ago, as many high quality papers were rejected by *Bone*. At the same time, there has been widespread concern about a surprising lack of reproducibility in preclinical research studies. The leaders of the National Institutes of Health in USA, Francis S. Collins and Lawrence A. Tabak, have addressed this concern by announcing a number of actions, including supporting researcher training on enhanced reproducibility and transparency of research findings underpinned by good experimental design. As a response to this concern, the ARRIVE guidelines for reporting animal research were also proposed to improve bioscience reporting, but have not as yet been widely enforced by all Journals. By contrast, in clinical studies involving humans, the use of the analogous CONSORT guidelines has been widely enforced by Journals. This is where *Bone Reports* comes in. While it is exciting and excellent to publish first, it is even better when those initial experimental observations are then confirmed and extended by other scientists in the discipline.

Bone Reports aims to make this important role of study confirmation and extension of findings less difficult to achieve. *Bone Reports* is a new online only, open access, peer reviewed Journal. Like its sister journal, *Bone*, *Bone Reports* is an interdisciplinary forum for the rapid publication of original research articles, and also case reports, across basic, translational and clinical aspects of bone and mineral metabolism. The Journal aims to publish papers that are scientifically sound, with the peer review process focused principally on verifying sound methodologies, and correct data analysis and interpretation. The Journal therefore welcomes studies either replicating or failing to replicate a previous study, and those with null findings. We believe *Bone Reports* fulfills the recently highlighted critical and current need to enhance research by publishing reproducibility studies and null findings.

As Editor-in-Chief, one of my aspirations for *Bone Reports* is that it further drives forward the research into bone biology that has underpinned the exciting therapeutic advances in the discipline of bone and mineral metabolism. It is only with methodologically sound and reproducible preclinical research studies, acknowledging the possible limitations of new technologies, that expensive clinical studies involving humans can be carefully planned and successfully completed. We see the role of the Journal as a cornerstone to support and nurture this scientific area, offering a platform to optimize and solidify the impact of emergent findings and to offer, too, the opportunity for doctors to gain insight into pathophysiological mechanisms in bone and mineral diseases through the publication of illustrative high quality case reports.

As a sister journal to *Bone*, we are in a unique position of being able to draw on the talents of a remarkable pool of experienced, expert reviewers and talented editors who have made *Bone* the home to some of the most exciting discoveries into bone and mineral metabolism, bone structure and imaging techniques. This support allows us to make *Bone Reports* an innovative home for improving scientific reproducibility in preclinical and translational research to further inform therapeutic interventions to improve the musculoskeletal health of our communities.

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